



(19)  European Patent office

(11) EP 0 836 868 A2

(12) EUROPEAN PATENT APPLICATION

(43) Publication date:  
04/22/1998 Patent sheet 1998/17

(51) Int Cl<sup>6</sup> A61N 1/40

(21) Application number: 97116389.4

(22) Application date: 09/19/1997

(84) Known contracting countries:  
AT BE CH DE DK ES FI FR GB GR IE IT LI  
LU MC NL PT SE  
Known extending countries:  
AL LT LV RO SI

(72) Inventor:  
• Hill, Wolfram  
79102 Freiburg, Germany  
• Dornhof, Konstantin  
78194 Immendingen-Zimmern, Germany

(30) Priority: 10/18/1996 DE 19643127

(74) Representative:  
Schmidt, Christian et al  
Manitz, Finsterwald & Partner  
Patent attorneys  
Robert-Koch-Strasse 1  
80538 Munich, Germany

(71) Applicant:  
Gebr. Berchtold GmbH & Co.  
78532 Tuttlingen, Germany

#### (54) High-frequency surgical instrument and procedure for its operation

(57) The invention provides a high-frequency surgical instrument with a high-frequency generator (11) with at least one active electrode (12) output (13) and at least one neutral electrode (14) output (15), to which at least one partially-neutral electrode (14a) of a neutral electrode pair (14a; 14b) may be connected whose individual electrodes (14a; 14b) are connected to an auxiliary voltage source with clearly lower frequency than the high frequency, whereby a monitoring circuit from the auxiliary voltage and the auxiliary current flowing between the partially-neutral electrodes (14a; 14b) creates an impedance signal (19) representative of the impedance between the two partially-neutral electrodes (14a; 14b), and when a first established upper alarm limit (17) and/or a second upper alarm limit (20) for the impedance signal (19) adaptable to the actual value of the impedance signal is exceeded, a high-frequency generator blocking signal (22) and/or an alarm signal (23) is issued. According to the invention, it is provided that a SET button (24) is provided to adjust the second alarm limit (20). When the button is pressed, the automatic adjustment process is activated.

Fig.1

